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ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY CLASS I PERMIT

COMPANY NAME:	Arizona Public Service Company
FACILITY NAME:	Yucca Power Plant
PERMIT NUMBER:	1000107
ORIS CODE:	0120
DATE ISSUED:	June 16, 1999
EXPIRY DATE:	June 16, 2004

SUMMARY

This operating permit is issued to Arizona Public Service Company (APS), the Permittee, for operation of their Yucca Power Plant, located five miles west of Yuma at Eighth Street and Somerton Road in Yuma County, Arizona.

The Yucca Power Plant is jointly owned by APS and the Imperial Irrigation District. The Yucca Plant provides power to the grid on an as-needed basis. The Yucca Plant's steam generator was installed in 1959. Yucca remained a one-unit generating station until the 1970's, when the five combustion turbines were built to meet the demands of the plant's growing customer base. Yucca currently has the capacity to generate 250,000 kilowatts. There is no air pollution control equipment installed on any of the turbine engines and the steam generator at the Yucca Plant. The Yucca Power Plant has two sources of fuel: natural gas and fuel oil. Natural gas for the Yucca Steam unit and combustion turbines is supplied by pipeline. Fuel oil is delivered to the plant by railroad tank cars or trucks.

All definitions, terms, and conditions used in this permit conform to those in the Arizona Administrative Code R18-2-101 et. seq. (A.A.C.) and 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the A.A.C. All terms and conditions in this permit are enforceable by the Administrator of the U.S. Environmental Protection Agency, except for those terms and conditions that have been designated as “State requirements”.

APS is a “major source”. The potential emission rates of the following pollutants are greater than 100 tons per year: (i) particulate matter, (ii) sulfur dioxide, (iii) nitrogen oxides, (iv) carbon monoxide, and (v) volatile organic compounds. APS is subject to the Acid Rain Program of the Clean Air Act. This permit is issued in accordance with Title V of the Clean Air Act, and Title 49, Chapter 3 of the Arizona Revised Statutes. Applicable requirements for the operations at the Yucca Plant are listed in Attachment “C” of this permit.

TABLE OF CONTENTS

Table 1: Summary of Permit Requirements

This table summarizes certain requirements that are applicable to Yucca Plant operations. It is intended for reference use only. The enforceable terms and conditions of this permit are contained in Attachments A through F of this permit.

Emission Unit	Pollutants Emitted	Control Measure	Emission Limits / Standards	Monitoring /Recordkeeping	Reporting[1]	Testing Frequency/ Methods
POINT SOURCES **P1. Steam Unit** **Primary Fuel - Natural Gas** [A.A.C. R18-2-702 and 703]	PM	No controls installed	$E = 1.02\ Q^{0.769}$ lb/hr	--	--	--
	SO_2	No controls installed	**	--	--	--
	NO_x	No controls installed	**	--	--	--
	Visible Emissions	No controls installed	Opacity ≤ 40%	Type, date, and time of fuel change.	Type, date, and time of fuel change.	--
P1. Steam Unit **Alternate Fuel - Fuel oil No.4, Fuel Oil No. 5, or Fuel Oil No. 6** [A.A.C. R18-2-702 and 703]	PM	No controls installed	$E = 1.02\ Q^{0.769}$ lb/hr	Keep on record the fuel purchase specification indicating: heating value, ash content, and fuel firing rate.	--	--
	SO_2	No controls installed	1.0 lb/MMBtu (max 3-hr average) heat input	Keep on record name of oil supplier, sulfur content of oil from which the shipment came, method used to determine sulfur content, density, heating value, and emission calculations performed pursuant to equation in II.D.2.b of Attachment B of this permit.	--	--
	NO_x	No controls installed	**	--	--	--
	Visible Emissions	No controls installed	Opacity ≤ 40%	Type, date, and time of fuel change. Number of hours fuel oil is burned. Opacity test result.	Type, date, and time of fuel change. Number of hours fuel oil is burned. Opacity test result.	If fuel oil is combusted continuously for greater than 48 hrs but less than 168 hrs. then test one time for opacity. If fuel oil is combusted continuously for greater than 168 hrs then test once during each 168 hr period for opacity. EPA Reference Method 9.

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POINT SOURCES **P2. Turbine #1, #2, #3, #4, and #21** **Primary Fuel - Natural Gas for turbines #1, #2, and #3** **Alternate Fuel - Natural Gas for Turbines #4 and #21** [A.A.C. R18-2-702 and 719]	PM	No controls installed	$E = 1.02\ Q^{0.769}$ lb/hr	Keep copy of FERC-approved Tariff agreement which contains the sulfur content of the fuel	--	--
	SO_2	No controls installed	**	Keep copy of FERC-approved Tariff agreement which contains the sulfur content of the fuel	Report any daily period during which sulfur content of the fuel exceeds 0.8%.	--
	NO_x and CO	No controls installed	**	Dates and hours of operation of each turbine.	Dates and hours of operation of each turbine.	Performance test in accordance with Section III.B of Attachment "B"
	Visible Emissions	No controls installed	≤ 40% for any period > 10 consecutive seconds except for first ten minutes after cold starting.	Type, date, and time of fuel change.	Type, date, and time of fuel change.	--
P2. Turbine #1, #2, #3, #4, and #21 **Primary Fuel - Fuel oil #2 for turbines #4 and #21** **Alternate Fuel - Fuel oil #2 for turbines #1, #2, and #3** [A.A.C. R18-2-702 and 719]	PM	No controls installed	$E = 1.02\ Q^{0.769}$ lb/hr	Keep on record the fuel purchase specification indicating: heating value, ash content, and fuel firing rate.	--	--
	SO_2	No controls installed	< 0.9 percent by weight 1.0 lb/MMBtu heat input	Keep on record name of oil supplier, sulfur content of oil from which the shipment came, method used to determine sulfur content, density, heating value, and emission calculations performed pursuant to equation in II.E.3.b(2) of Attachment "B".	Report any daily period during which sulfur content of the fuel exceeds 0.8%.	--
	NO_x and CO	No controls installed	**	Dates and hours of operation of each turbine.	Dates and hours of operation of each turbine.	Performance test in accordance with Section III.B of Attachment "B"

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	Visible Emissions	No controls installed	≤ 40% for any period > 10 consecutive seconds except for first ten minutes after cold starting.	Type, date, and time of fuel change. Number of hours fuel oil is burned. Opacity test result.	Type, date, and time of fuel change. Number of hours fuel oil is burned. Opacity test result.	If fuel oil is combusted continuously for greater than 48 hrs but less than 168 hrs. then test one time for opacity. If fuel oil is combusted continuously for greater than 168 hrs then test once during each 168 hr period for opacity. EPA Reference Method 9.
P3. Auxiliary Boiler 1 **Primary Fuel - Natural Gas** **Plant Water Heaters** **Primary Fuel - Natural Gas** [A.A.C. R18-2-724]	PM	No controls installed	$E = 1.02\ Q^{0.769}$ lb/hr	--	--	--
	SO_2	No controls installed	**	--	--	--
	NO_x	No controls installed	**	--	--	--
	Visible Emissions	No controls installed	Opacity ≤ 15%	Type, date, and time of fuel change.	Type, date, and time of fuel change. Report all six-minute periods in which opacity of any plume exceeds 15%.	--
P3. Auxiliary Boiler 1 **Alternate Fuel - Fuel oil #4 through 6** [A.A.C. R18-2-724]	PM	No controls installed	$E = 1.02\ Q^{0.769}$ lb/hr	Keep on record the fuel purchase specification indicating: heating value, ash content, and fuel firing rate.	--	--
	SO_2	No controls installed	1.0 lb/MMBtu heat input	Keep on record name of oil supplier, sulfur content of oil from which the shipment came, method used to determine sulfur content, heating value, and emission calculations performed pursuant to equation in III.F.3.b. of Attachment B.	--	--
	NO_x	No controls installed	**	--	--	--

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Emission Unit	Pollutants Emitted	Control Measure	Emission Limits / Standards	Monitoring /Recordkeeping	Reporting[1]	Testing Frequency/ Methods
	Visible Emissions	No controls installed	Opacity ≤ 15%	Type, date, and time of fuel change. Number of hours fuel oil is burned. Opacity test result.	Type, date, and time of fuel change. Number of hours fuel oil is burned. Opacity test result. Report all six-minute periods in which opacity of any plume or effluent exceeds 15%.	If fuel oil is combusted continuously for greater than 48 hrs but less than 168 hrs. then test one time for opacity. If fuel oil is combusted continuously for greater than 168 hrs then test once during each 168 hr period for opacity. EPA Reference Method 9.
P4. Cooling Tower No. 1 [A.A.C. R18-2-730]	Opacity	No controls installed	Opacity ≤ 40%	--	--	--
	PM	No controls installed	$E = 55.0P^{0.11}-40$	--	--	--
FUGITIVE SOURCES						
F1. *Non-point Sources*						
a. Driveways, Parking lots, and vacant lots [A.A.C. R18-2-604.A]	Visible Emissions	Dust suppressant, adhesive soil stabilizer, paving, or barring access	Opacity ≤ 40%	Date and type of activity. Type of control used.	--	--
b. Open area construction, reparation, etc. and earth excavation [A.A.C. R18-2-604.A]	Visible Emissions	Dust suppressant, adhesive soil stabilizer, paving, covering, landscaping, detouring, landscaping, barring access or wetting agent	Opacity ≤ 40%	Date and type of activity. Type of control used.	--	--
c. Roadway construction, repair or reconstruction [A.A.C. R18-2-605.A]	Visible Emissions	Dust suppressant, temporary paving, detouring, or wetting agent	Opacity ≤ 40%	Date and type of activity. Type of control used.	--	--

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Emission Unit	Pollutants Emitted	Control Measure	Emission Limits / Standards	Monitoring /Recordkeeping	Reporting[1]	Testing Frequency/ Methods
d. Material transportation [A.A.C. R18-2-605.B]	Visible Emissions	Covering, dust suppressant or wetting agent	Opacity ≤ 40%	Date and type of activity. Type of control used.	--	--
e. Material Handling [A.A.C. R18-2-606]	Visible Emissions	Covering, dust suppressant, spray bars, hood, or wetting agents	Opacity ≤ 40%	Date and type of activity. Type of control used	--	--
f. Storage Piles [A.A.C. R18-2-607.A]	Visible Emissions	Covering, dust suppressant, chemical stabilization, or wetting agents	Opacity ≤ 40%	Date and type of activity. Type of control used.	--	--
g. Stacking and reclaiming machinery at storage piles [A.A.C. R18-2-607.B]	Visible Emissions	Minimize fall, dust suppressant, spray bars or wetting agents	Opacity ≤ 40%	Date and type of activity. Type of control used.	--	--
h. Cleaning of site and roadway [A.A.C. R18-2-804.B]	Visible Emissions	Wetting agent or dust suppressant	**	Date and duration of project and control measure used	--	--
F2 *Abrasive Blasting* [A.A.C R18-2-726 and 702.B]	Visible Emissions	Wet blasting; enclosure with dust collection device.	Opacity ≤ 40%	Date, type of project and control measures used	--	--
F3 *Spray Painting* [A.A.C. R18-2-727, 702.B and SIP R9-3-527.C]	VOC	Enclosures containing at least 96% of overspray except for architectural coating and spray painting, dispose of <1.5 gallons	**	--	--	--
	Visible Emissions	Not required.	Opacity ≤ 40%	--	--	--

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Emission Unit	Pollutants Emitted	Control Measure	Emission Limits / Standards	Monitoring /Recordkeeping	Reporting[1]	Testing Frequency/ Methods
F4. *Solvent Cleaners /Degreasers* [A.A.C. R18-2-730.F]	VOCs	Install means to reduce air pollution from evaporation, leakage, or discharge of solvents being processed, stored, used, or transported.	--	--	--	--
F5 *Demolition/Renovation* [A.A.C. R18-2-1101.A.8]	Asbestos	As required by rule	As required by rule	Required paperwork on file	--	--
F6 *Nonvehicle Air Conditioner Maintenance and/or Services* [40 CFR 82, Subpart F]	Ozone depleting substances	As required by rule	As required by rule	Required paperwork on file	--	--

NOTE: ** No applicable standard
-- Not required
(1) Semi-annual compliance certifications are required

ATTACHMENT "A": GENERAL PROVISIONS

Air Quality Control Permit No. 1000107
For
ARIZONA PUBLIC SERVICE COMPANY - YUCCA POWER PLANT

I. PERMIT EXPIRATION AND RENEWAL [A.R.S. § 49-426.F, A.A.C. R18-2-304.C.2, 306.A.1, and 322]

A. This permit is valid for a period of five years from the date of issuance of the permit.

B. The Permittee shall submit an application for renewal of this permit at least 6 months, but not more than 18 months prior to the date of permit expiration.

II. COMPLIANCE WITH PERMIT CONDITIONS

[A.A.C. R18-2-306.A.8.a and b, A.R.S. § 49-463, and A.R.S. §49-464]

A. The Permittee shall comply with all the conditions contained in Attachments "A" through "F"of this permit including all applicable requirements of Arizona air quality statutes and the air quality rules. Any permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act (Act).

B. Need to halt or reduce activity not a defense. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE [A.A.C. R18-2-306.A.8.c and 321.A]

A. The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination; or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

B. The permit shall be reopened and revised under any of the following circumstances:

1. Additional applicable requirements under the Act become applicable to the Class I source. Such reopening shall only occur if there are three or more years remaining in the permit term. The reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to R18-2-322(B). Any permit revision required pursuant to this subparagraph shall comply with provisions in R18-2-322 for permit renewal and shall reset the five year permit term.

2. Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the Class I permit.

3. The Director or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

4. The Director or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.

C. Proceedings to reopen and issue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall, except for reopenings under paragraph 1 above, affect only those parts of the permit for which cause to reopen exists. Such reopenings shall be made as expeditiously as practicable. Permit reopenings for reasons other than those stated in paragraph III.B.1 of this Attachment shall not result in a resetting of the five year permit term.

IV. POSTING OF PERMIT [A.A.C. R18-2-315]

A. Permittee shall post this permit, or a certificate of permit issuance where the facility is located in such a manner as to be clearly visible and accessible. All equipment covered by the permit shall be clearly marked with one of the following:

1. Current permit number.

2. Serial number or other equipment number that is also listed in the permit to identify that piece of equipment.

B. A copy of the complete permit shall be kept on the site.

V. FEE PAYMENT [A.A.C. R18-2-326 and 306.A.9.]

Permittee shall pay fees to the Director pursuant to A.R.S. § 49-426(E) and A.A.C. R18-2-326.

VI. ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE [A.A.C. R18-2-327]

A. Permittee shall complete and submit to the Director an annual emissions inventory questionnaire. The questionnaire is due by March 31 or ninety days after the Director makes the inventory form available each year, whichever occurs later, and shall include emission information for the previous calendar year.

B. The questionnaire shall be on a form provided by the Director and shall include the information required by A.A.C. R18-2-327.

VII. COMPLIANCE CERTIFICATION

A. Permittee shall submit a compliance certification to the Director twice each year, which describes the compliance status of the source with respect to each permit condition. The first certification shall be submitted no later than April 30th, and shall report the compliance status of the source during the period between October 1st of the previous year, and March 31st of the current year.

The second certification shall be submitted no later than October 31st, and shall report the compliance status of the source during the period between April 1st and September 30th of the current year. The initial compliance certification shall reflect compliance status of the source beginning the date of permit issuance. [A.A.C. R18-2-309.2.a]

The compliance certifications shall include the following:

1. Identification of each term or condition of the permit that is the basis of the certification; [A.A.C. R18-2-309.2.c.i]

2. Compliance status with each applicable requirement; [A.A.C. R18-2-309.2.c.ii]

3. Whether compliance was continuous or intermittent; [A.A.C. R18-2-309.2.c.iii]

4. Method(s) used for determining the compliance status of the source, currently and over the reporting period; [A.A.C. R18-2-309.2.c.iv]

5. A progress report on all outstanding compliance schedules submitted pursuant to Section XII.D of this Attachment. Progress reports submitted with compliance certifications satisfy the reporting requirements of A.A.C. R18-2-309.5.d. [A.A.C. R18-2-309.5.d]

B. A copy of all compliance certifications for Class I permits shall also be submitted to the EPA Administrator. [A.A.C. R18-2-309.2.d]

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS [A.A.C. R18-2-309.3]

Any document required to be submitted by this permit, including reports, shall contain a certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this permit shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

IX. INSPECTION AND ENTRY [A.A.C. R18-2-309.4]

The Permittee shall allow the Director or the authorized representative of the Director upon presentation of proper credentials to:

A. Enter upon the Permittee's premises where a source is located or emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;

B. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;

C. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and

E. Record any inspection by use of written, electronic, magnetic and photographic media.

X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD [A.A.C. R18-2-304.C]

If this source becomes subject to a standard promulgated by the Administrator pursuant to section 112(d) of the Act, then the Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.

XI. ACCIDENTAL RELEASE PROGRAM

If this source becomes subject to the provisions of 40 CFR Part 68, then the Permittee shall comply with these provisions according to the timeline specified in 40 CFR Part 68. [40 CFR 68]

XII. REPORTING OF EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCIES

A. EXCESS EMISSIONS REPORTING [A.A.C R18-2-310.C]

1. Excess emissions, as defined in A.A.C. R18-2-101.37, shall be reported as follows:

a. The Permittee shall report to the Director any emissions in excess of the limits established by this permit. Such report shall be in two parts as specified below:

(1) Notification by telephone or facsimile within 24 hours of the time when the Permittee first learned of the occurrence of excess emissions including all available information from paragraph b. of this subsection.

(2) Detailed written notification within 72 hours of the notification pursuant to subparagraph (1) of this paragraph.

b. Report shall contain the following information:

(1) Identity of each stack or other emission point where the excess emissions occurred.

(2) Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions.

(3) Date, time and duration or expected duration of the excess emissions.

(4) Identity of the equipment from which the excess emissions emanated.

(5) Nature and cause of such emissions.

(6) If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions.

(7) Steps taken to limit the excess emissions.

2. In the case of continuous or recurring excess emissions, the notification requirements of this section shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in such notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period or changes in the nature of the emissions as originally reported shall require additional notification pursuant to subsection A.1.a.(2) of this Section. [A.A.C. R18-2-310.D]

3. It shall be the burden of the Permittee to demonstrate, through submission of the data and information required by Section XII.A of Attachment "A", that all reasonable and practicable measures within the Permittee's control were implemented to prevent the occurrence of excess emissions. [A.A.C. R18-2-310.B]

B. PERMIT DEVIATIONS REPORTING [A.A.C. R18-2-306.A.5.b]

1. A deviation means any situation in which an emissions unit fails to meet a permit term or condition. A deviation is not always a violation. A deviation can be determined through observation or through review of data obtained from any testing, monitoring, or recordkeeping established in this permit. For a situation lasting more than 24 hours which constitutes a violation, each 24 hour period is considered a separate deviation. Included in the meaning are any of the following:

   a. A situation where emissions exceeded an emission limitation or standard;
   b. A situation where process or control device parameter values indicate that an emission limitation or standard has not been met;
   c. A situation in which observations or data collected demonstrates noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit.

2. Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Prompt reporting shall mean that the report was submitted to the Director by certified mail, facsimile, or hand delivery within two working days of the time the deviation occurred.

3. All instances of deviations from permit requirements shall be clearly identified in the required semiannual monitoring report specified in Attachment "B", Section III.B, and shall be certified by the responsible official. [A.A.C. R18-2-306.A.5.a]

C. REPORTING OF EMERGENCIES [A.A.C. R18-2-306.E]

1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

a. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of paragraph (b) of this subsection are met.

b. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An emergency occurred and that the permittee can identify the cause(s) of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and

(4) The permittee submitted notice of the emergency to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

c. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

d. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

D. For any excess emission or permit deviation that cannot be corrected within 72 hours, the Permittee is required to submit a compliance schedule to the Director within 21 days of such occurrence. The compliance schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with the permit terms or conditions that have been violated. [A.R.S. §49-426.I.5]

XIII. RECORD KEEPING REQUIREMENTS [A.A.C. R18-2-306.A.4]

A. Permittee shall keep records of all required monitoring information including, but not limited to, the following:

1. The date, place as defined in the permit, and time of sampling or measurements;

2. The date(s) analyses were performed;

3. The name of the company or entity that performed the analyses;

4. A description of the analytical techniques or methods used;

5. The results of such analyses; and

6. The operating conditions as existing at the time of sampling or measurement.

B. Permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings or other data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

XIV. REPORTING REQUIREMENTS [A.A.C. R18-2-306.A.5.a]

Permittee shall submit the following reports :

A. Compliance certifications in accordance with Section VII of Attachment "A".
B. Reports of excess emissions, permit deviations, and emergencies in accordance with Section XII of Attachment "A".
C. Other reports required by Section II of Attachment "B".

XV. DUTY TO PROVIDE INFORMATION [A.A.C. R18-2-304.G and 306.A.8.e]

A. The Permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee shall furnish an additional copy of such records directly to the Administrator along with a claim of confidentiality.

B. If the Permittee has failed to submit any relevant facts or if the Permittee has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

XVI. PERMIT AMENDMENT OR REVISION [A.A.C. R18-2-318, 319 and 320]

Permittee shall apply for a permit amendment or revision for changes to the facility which do not qualify for a facility change without revision under Section XVII, as follows:

A. Administrative Permit Amendment (A.A.C. R18-2-318);

B. Minor Permit Revision (A.A.C. R18-2-319);

C. Significant Permit Revision (A.A.C. R18-2-320).

The applicability and requirements for such action are defined in the above referenced regulations.

XVII. FACILITY CHANGE WITHOUT PERMIT REVISION [A.A.C. R18-2-317]

A. Permittee may make changes at the permitted source without a permit revision if all of the following apply:

1. The changes are not modifications under any provision of Title I of the Act or under A.R.S. § 49-401.01(18).

2. The changes do not exceed the emissions allowable under the permit whether expressed therein as a rate of emissions or in terms of total emissions.

3. The changes do not violate any applicable requirements or trigger any additional applicable requirements.

4. The changes satisfy all requirements for a minor permit revision under R18-2-319(A).

5. The changes do not contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

B. The substitution of an item of process or pollution control equipment for an identical or substantially similar item of process or pollution control equipment shall qualify as a change that does not require a permit revision, if it meets all of the requirements of subsections (A) and (C) of this Section.

C. For each such change under subsections A and B of this Section, a written notice by certified mail or hand delivery shall be received by the Director and, for Class I permits, the Administrator, a minimum of 7 working days in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided less than 7 working days in advance of the change but must be provided as far in advance of the change as possible or, if advance notification is not practicable, as soon after the change as possible. Each notification shall include:

1. When the proposed change will occur.

2. A description of each such change.

3. Any change in emissions of regulated air pollutants.

4. The pollutants emitted subject to the emissions trade, if any.

5. The provisions in the implementation plan that provide for the emissions trade with which the source will comply and any other information as may be required by the provisions in the implementation plan authorizing the trade.

6. If the emissions trading provisions of the implementation plan are invoked, then the permit requirements with which the source will comply.

7. Any permit term or condition that is no longer applicable as a result of the change.

XVIII. TESTING REQUIREMENTS [A.A.C.R18-2-312]

A. Operational Conditions During Performance Testing

Tests shall be conducted during operation at the full load of the unit under representative operational conditions unless other conditions are required by the applicable test method or in this permit. With prior written approval from the Director, testing may be performed at a lower rate. Operations during start-up, shutdown, and malfunction (as defined in A.A.C. R18-2-101) shall not constitute representative operational conditions unless otherwise specified in the applicable standard.

B. Performance tests shall be conducted and data reduced in accordance with the test method and procedures contained in the Arizona Testing Manual unless modified by the Director pursuant to A.A.C. R18-2-312.B.

C. Test Plan

At least 14 calendar days prior to performing a test, the owner or operator shall submit a test plan to the Director, in accordance with the Arizona Testing Manual. This test plan must include the following:

1. test duration;
2. test location(s);
3. test method(s); and
4. source operation and other parameters that may affect test results.

D. Stack Sampling Facilities

Permittee shall provide or cause to be provided, performance testing facilities as follows:

1. Sampling ports adequate for test methods applicable to the facility;
2. Safe sampling platforms;
3. Safe access to sampling platforms; and
4. Utilities for sampling and testing equipment.

E. Interpretation of Final Results

Each performance test shall consist of three separate runs using the required test method. Each run shall be conducted in accordance with the applicable standard and test method. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. If a sample is accidentally lost or conditions occur which are not under the Permittee's control and which may invalidate the run, compliance may, upon the Director's approval, be determined using the arithmetic mean of the other two runs. If the Director or the Director's designee is present, tests may only be stopped wiht the Director's or such designee's approval. If the Director or the Director's designee is not present, tests may only be stopped for good cause. Good cause includes, forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions or other conditions beyond the Permittee's control. Termination of any test without good cause after the first run is commenced shall constitute a failure of the test. Supporting documentation which demonstrates good cause must be submitted.

F. Report of Final Test Results

A written report of the results of all performance tests shall be submitted to the Director within 30 days after the test is performed. The report shall be submitted in accordance with the Arizona Testing Manual and A.A.C. R18-2-312.A.

XIX. PROPERTY RIGHTS [A.A.C. R18-2-306.A.8.d]

This permit does not convey any property rights of any sort, or any exclusive privilege.

XX. SEVERABILITY CLAUSE [A.A.C. R18-2-306.A.7]

The provisions of this permit are severable. In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force.

XXI. PERMIT SHIELD [A.A.C. R18-2-325]

Compliance with the conditions of this permit shall be deemed compliance with the applicable requirements identified in Attachment "C" of this permit. The permit shield shall not apply to any changes made pursuant to Section XVI.B of this Attachment and Section XVII of this Attachment.

XXII. ACID RAIN

A. When provisions or requirements of the regulations incorporated pursuant to A.A.C. R18-2-333.A (Acid Rain) conflict with any of the applicable requirements, the regulations incorporated by A.A.C. R18-2-333.A (Acid Rain) shall apply and take precedence.

[A.A.C. R18-2-333]

B. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid rain program, provided that such increases do not require a permit revision under any other applicable requirement. [A.A.C. R18-2-306.A.6.a]

C. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.

[A.A.C. R18-2-306.A.6.b]

D. Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the Act. [A.A.C. R18-2-306.A.6.c]

E. All of the following are prohibited:

1. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners or the operators of the unit or the designated representative of the owners or the operators as of the applicable allowance transfer deadline;
2. Exceedances of applicable emission rates;
3. The use of any allowance prior to the year for which it was allocated; and
4. Contravention of any other provision of the permit.

[A.A.C. R18-2-306.A.6.d]

ATTACHMENT "B": SPECIFIC CONDITIONS

Air Quality Control Permit No. 1000107
For
ARIZONA PUBLIC SERVICE COMPANY - YUCCA POWER PLANT

I. EMISSION LIMITS/STANDARDS

A. Steam Unit 1

1. Opacity Standard

Permittee shall not cause, allow or permit to be emitted into the atmosphere any plume or effluent the opacity of which exceeds 40 percent, measured in accordance with EPA Reference Method 9. [A.A.C.R18-2-702.B]

2. Particulate Matter Standard

Permittee shall not cause, allow or permit the emission of particulate matter in excess of the amounts calculated by the following equation:

$$E = 1.02\ Q^{0.769}$$

E = the maximum allowable particulate matter emissions rate in pounds -mass per hour
Q = the heat input in million Btu per hour [A.A.C. R18-2-703.C.1]

3. Sulfur Dioxide Standard

Liquid Fuel

Permittee shall not cause or allow emissions of more than 1.0 pound sulfur dioxide maximum three hour average per million BTU heat input. [A.A.C.R18-2-703.E.1]

4. Fuel Limitation

a. Permittee shall not use high sulfur oil (fuel sulfur content $\geq$ 0.90% by weight) as a fuel unless the Permittee demonstrates to the satisfaction of the Director that sufficient quantities of low sulfur oil are not available for use by the source and that it has adequate facilities and contingency plans to insure that the sulfur dioxide ambient air quality standards set forth in A.A.C. R18-2-202 will not be violated. [A.A.C.R18-2-703.H]

b. Permittee shall burn only the following as fuel in Steam Unit 1:

(1) Natural gas;
(2) Fuel oil no. 4;
(3) Fuel oil no. 5;
(4) Fuel oil no. 6; or

(5) Co-firing natural gas and Fuel oil nos. 4 through 6.

5. Definition of Heat Input

a. For the purposes of conditions I.A.2 and I.A.3 of this Attachment, "heat input" is defined as the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. The heat content of solid fuel shall be determined in accordance with A.A.C. R18-2-311. Compliance tests shall be conducted during operation at the nominal rated capacity of the unit.

[A.A.C.R18-2-703.B]

b. The total heat input from the burning of all fuels shall be computed as follows:

$$Total\ Heat\ Input = \sum_{i=1}^{k} (NHV_i)\ x\ (U_i)$$

Where:

NHV_i = Net heating value of each fuel "i" at standard temperature and pressure; and

U_i = Fuel firing rate of each fuel "i".

B. Gas Turbine Nos. 1, 2, 3, 4, and 21 and Diesel Start-up Engines CT 1, 2, and 21

1. Opacity Standard

Permittee shall not cause, allow or permit to be emitted into the atmosphere from any stationary rotating machinery, smoke for any period of time greater than ten consecutive seconds which exceeds 40 percent opacity. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes.

[A.A.C. R18-2-719.E]

2. Particulate Matter Standard

Permittee shall not cause, allow, or permit the emission of particulate matter, caused by combustion of fuel, from any of the stacks of stationary rotating machinery in excess of the amounts calculated by the following equation:

$E = 1.02\ Q^{0.769}$ where:

E= the maximum allowable particulate emissions rate in pounds-mass per hour.

Q= the heat input in million Btu per hour. [A.A.C. R18-2-719.C]

3. Sulfur Dioxide Standard

a. Liquid Fuel

Permittee shall not cause or allow emissions of more than 1.0 pounds of sulfur dioxide per million Btu heat input. [A.A.C. R18-2-719.F]

4. Fuel Limitation

a. Permittee shall not use high sulfur oil (fuel sulfur content ≥ 0.90% by weight) as a fuel unless the Permittee demonstrates to the satisfaction of the Director that sufficient quantities of low sulfur oil are not available for use by the source and that it has adequate facilities and contingency plans to insure that the sulfur dioxide ambient air quality standards set forth in A.A.C. R18-2-202 will not be violated. [A.A.C. R18-2-719.H]

b. Permittee shall burn only the following as fuel in the following units:

(1) Gas Turbine Nos. 1, 2, and 3

(a) Natural gas;
(b) Fuel oil no. 2; or
(c) Co-firing natural gas and Fuel oil no. 2.

(2) Gas Turbine Nos. 4 and 21

(a) Fuel oil no. 2;
(b) Natural gas; or
(c) Co-firing natural gas and Fuel oil no. 2.

(3) Diesel Start-up Engines CT 1, 2, and 21

(a) Fuel oil no. 2 [A.A.C. R18-2-306.A.2]

5. Definition of Heat Input

a. For the purposes of conditions I.B.2 and I.B.3 of this Attachment, "heat input" is defined as the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. Compliance tests shall be conducted during operation at the nominal rated capacity of each unit.
[A.A.C. R18-2-719.B]

b. The total heat input from the burning of all fuels shall be computed as follows:

$$Total\ Heat\ Input = \sum_{j=1}^{n} \sum_{i=1}^{k} (NHV_{i,j}) \times (U_{i,j})$$

Where:
NHV_i = Net heating value of each fuel "i"at standard temperature and pressure fired in each unit "j"; and
U_i = Fuel firing rate of each fuel "i" in each unit "j".

C. Auxiliary Boiler 1 and Plant Water Heaters

1. Opacity Standard

Permittee shall not cause, allow or permit to be emitted into the atmosphere from Auxiliary Boiler 1 and the plant water heaters smoke which exceeds 15 percent opacity. [A.A.C. R18-2-724.J]

2. Particulate Matter Standard [A.A.C. R18-2-724.C.1]

Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from Auxiliary Boiler 1 and the plant water heaters in excess of the amount calculated by the following equation:

$E = 1.02\ Q^{0.769}$ where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.
Q = the heat input in million Btu per hour.

3. Sulfur Dioxide Standard

Liquid Fuel

Permittee shall not cause, allow, or permit emission of more than 1.0 pounds of sulfur dioxide per million Btu heat input from Auxiliary Boiler 1. [A.A.C. R18-2-724.E]

4. Fuel Limitation

a. Permittee shall not use high sulfur oil (fuel sulfur content $\geq$ 0.90% by weight) as a fuel unless the Permittee demonstrates to the satisfaction of the Director that sufficient quantities of low sulfur oil are not available for use by the source and that it has adequate facilities and contingency plans to insure that the sulfur dioxide ambient air quality standards set forth in A.A.C. R18-2-202 will not be violated. [A.A.C. R18-2-724.G]

b. Permittee shall burn only the following as fuel in Auxiliary Boiler 1:

(1) Natural gas;
(2) Fuel oil no. 4;
(3) Fuel oil no. 5;
(4) Fuel oil no. 6; or
(5) Co-firing natural gas and fuel oil nos. 4 through 6.

c. Permittee shall burn only the following as fuel in the water heaters:
(1) Natural gas.

5. Definition of Heat Input

a. For the purposes of conditions I.C.2 and I.C.3 of this Attachment, “heat input” is defined as the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. The heat content of solid fuel shall be determined in accordance with A.A.C. R18-2-311. Compliance tests shall be conducted during operation at the nominal rated capacity of each unit.
[A.A.C. R18-2-724.B]

b. The total heat input from the burning of all fuels shall be computed as follows:

$$Total\ Heat\ Input = \sum_{j=1}^{n} \sum_{i=1}^{k} (NHV_{i,j}) \times (U_{i,j})$$

Where:

NHV_i = Net heating value of each fuel "i"at standard temperature and pressure fired in each unit "j"; and

U_i = Firing rate of each fuel "i" in each unit "j".

D. Cooling Tower

1. Opacity Standard

Permittee shall not cause, allow or permit to be emitted into the atmosphere any plume or effluent the opacity of which exceeds 40 percent, measured in accordance with EPA Reference Method 9. [A.A.C.R18-2-702.B]

2. Particulate Matter Standard

Permittee shall not cause, allow or permit the emission of particulate matter in excess of the amounts calculated by the following equation:

$E = 55.0P^{0.11} - 40$

Where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour; and

P = the process weight rate in tons-mass per hour. [A.A.C. R18-2-730.A.1]

3. Permittee shall not emit gaseous or odorous materials from equipment, operations, or premises in such quantities or concentrations to cause air pollution.

[A.A.C. R18-2-730.D]

4. Where a stack, vent, or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet by the Permittee thereof to a degree that will adequately dilute, reduce, or eliminate the discharge of air pollution to adjoining property. [A.A.C. R18-2-730.G]

E. Non-Point Sources

1. Open Areas, Roadways & Streets, Storage Piles, and Material Handling

a. Permittee shall not cause, allow or permit visible emissions from open areas, roadways and streets, storage piles or material handling in excess of 40 %

opacity measured in accordance with the Arizona Testing Manual, Reference Method 9. [A.A.C.R18-2-610]

b. Permittee shall employ one or more of the following reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne:

(1) Use approved dust suppressants, adhesive soil stabilizer, paving, covering, landscaping, detouring, or wetting agents on, or bar access to open areas during construction operations, repair operations, demolition activities, clearing operations, and leveling operations, or when any earth is moved or excavated; [A.A.C.R18-2-604.A]

(2) Use approved dust suppressants, adhesive soil stabilizer, or paving on, or bar access to driveways, parking areas, and vacant lots where motor vehicular activity occurs; [A.A.C.R18-2-604.A. and B]

(3) Use approved dust suppressants, temporary paving, detouring or wetting agents when a roadway is repaired, constructed, or reconstructed; [A.A.C.R18-2-605.A]

(4) Use dust suppressants, wetting agents, or cover the load adequately when transporting material likely to give rise to airborne dust; [A.A.C.R18-2-605.B]

(5) Use spray bars, hoods, wetting agents, dust suppressants, or cover when crushing, handling, or conveying material that is likely to give rise to airborne dust; [A.A.C.R18-2-606]

(6) Adequately cover, or use wetting agents, chemical stabilization, or dust suppressants when stacking, piling, or otherwise storing organic or inorganic dust producing material; [A.A.C.R18-2-607.A]

(7) Operate stacking and reclaiming machinery utilized at storage piles at all times with a minimum fall of material or with the use of spray bars and wetting agents; [A.A.C.R18-2-607.B]

(8) Use wetting agents or dust suppressants before the cleaning of site, roadway, or alley. Earth or other material shall be removed from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or by other means; or [A.A.C.R18-2-804.B]

(9) Any other method as proposed by the Permittee and approved by the Director.

2. Open Burning [A.A.C.R18-2-602]

Except as provided in A.A.C. R18-2-602.C(1), C(3), and C(4), and except when permitted to do so by either ADEQ or the local officer delegated the authority for issuance of open burning permits the Permittee shall not conduct open burning.

F. Other Periodic Activities

1. Abrasive Blasting [A.A.C. R18-2-726]

a. The Permittee shall not cause or allow sandblasting or other abrasive blasting without minimizing dust emissions to the atmosphere through the use of good modern practices. Good modern practices include:

(1) wet blasting;
(2) effective enclosures with necessary dust collecting equipment; or
(3) any other method as approved by the Director.

b. Permittee shall not cause, allow or permit visible emissions from sandblasting or other abrasive blasting operations in excess of 40% opacity as measured by EPA Reference Method 9. [A.A.C. R18-2-702.B]

2. Use of Paints

While performing spray painting operations the Permittee shall comply with the following requirements:

a. The Permittee shall not conduct any spray painting operation without minimizing organic solvent emissions. Such operations other than architectural coating and spot painting, shall be conducted in an enclosed area equipped with controls containing no less than 96 percent of the overspray. [A.A.C.R18-2-727.A]

b. The Permittee shall not either:

(1) Employ, apply, evaporate or dry any architectural coating containing photochemically reactive solvents for industrial or commercial purposes; or
(2) Thin or dilute any architectural coating with a photochemically reactive solvent. [A.A.C.R18-2-727.B]

c. For the purposes of parts b. and e. of this condition, a photochemically reactive solvent shall be any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified in paragraphs (1) through (3) of this subsection, or which exceeds any of the following percentage composition limitations, referred to the total volume of solvent:

(1) A combination of the following types of compounds having an olefinic or cyclo-olefinic type of unsaturation - hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones : five percent
(2) A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: eight percent
(3) A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent [A.A.C.R18-2-727.C]

d. Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the groups or organic compounds described in subsection c(1) through c(3) of this condition, it shall be

considered to be a member of the group having the least allowable percent of the total volume of solvents. [A.A.C.R18-2-727.D]

e. The Permittee shall not dispose by evaporation more than 1.5 gallons of photochemically reactive solvent in any one day. [SIP Provision R9-3-527.C]

f. Visible emissions from spray painting operations shall not have an opacity greater than 40%, measured in accordance with by EPA Reference Method 9. [A.A.C.R18-2-702.B]

3. Solvent Degreasing and Solvent Cleaning Tanks

Permittee shall process, store, use, and transport materials including solvents or volatile compounds in such a manner and by such means that they will not evaporate, leak, escape, or be otherwise discharged into the atmosphere so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage, or discharge, the installation and usage of such control methods, devices, or equipment shall be mandatory. [A.A.C. R18-2-730.F]

4. Mobile Sources

a. Classification

The requirements of this condition are applicable to mobile sources which either move while emitting air contaminants or are frequently moved during the course of their utilization but are not classified as motor vehicles, agricultural vehicles, or agricultural equipment used in normal farm operations. Mobile sources shall not include portable sources as defined in A.A.C. R18-2-101.84. [A.A.C. R18-2-801]

b. Roadway and Site Cleaning Machinery

Permittee shall not cause, allow or permit to be emitted into the atmosphere from any roadway and site cleaning machinery smoke or dust for any period greater than ten consecutive seconds, the opacity of which exceeds 40 percent. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. [A.A.C. R18-2-804.A]

5. Demolition/Renovation

The Permittee shall comply with the applicable requirements of 40 CFR 61, Subpart M (National Emissions Standards for Hazardous Air Pollutants - Asbestos). [A.A.C.R18-2-1101.A.8]

6. Nonvehicle Air Conditioner Maintenance and/or Services

The Permittee shall comply with the applicable requirements of 40 CFR 82 - Subpart F (Protection of Stratospheric Ozone - Recycling and Emissions Reduction). [40 CFR 82, Subpart F]

II. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

A. Within 180 days of issuance of this permit the owner or operator shall have on staff a person that is certified in EPA Reference Method 9. [A.A.C. R18-2-306.A.3]

B. At the time the compliance certifications required by Section VII of Attachment "A" are submitted, the Permittee shall submit reports of all monitoring activities required by Section II of this Attachment performed in the same six month period as applies to the compliance certification period. [A.A.C. R18-2-306.A.5.a]

C. Permittee shall log in ink or in an electronic format a record of any change in fuel type including:

1. Type of fuel change;
2. Date of the fuel change; and
3. Time of the fuel change.

D. Monitoring, Recordkeeping, and Reporting Requirements for Steam Unit 1

1. Visible Emissions while Burning Liquid Fuel

Permittee shall monitor opacity according to the following schedule:

a. If liquid fuel is combusted in the unit continuously for a time period greater than 48 hours but less than 168 hours, at least one opacity reading will be observed at the exit of the unit's stack.

b. If liquid fuel is combusted in the unit continuously for a time period greater than 168 hours, at least one opacity reading will be observed during each 168 hour period at the exit of the unit's stack.

All opacity readings will be observed in accordance with EPA Reference Method 9. Permittee shall log in ink or in an electronic format and maintain a record of the opacity readings from above and the number of hours fuel oil is burned continuously.

2. Particulate Matter and Sulfur Dioxide while Burning Liquid Fuel

a. Permittee shall keep on record at the site the purchase specification or other documentation indicating the following information concerning the liquid fuel being fired for each shipment of fuel oil received during the permit term:

(1) The name of the fuel oil supplier;
(2) The heating value of the fuel oil;
(3) The density of the fuel oil;
(4) The ash content of the fuel oil;
(5) The sulfur content of the fuel oil from which the shipment came;
(6) The method used to determine the ash content of the fuel oil; and
(7) The method used to determine the sulfur content of the fuel oil.

b. Permittee shall maintain records of all emissions calculations performed for any change in (2), (3), or (5) above using the following equation:

SO_2 (lb/MMBtu) = 2.0 x [(Weight percent of sulfur/100) x Density (lb/gal)]/[(Heating value (Btu/gal)) x (1 MMBtu/1,000,000 Btu)]

Alternatively, Permittee shall maintain records of the sulfur dioxide emissions calculated through the plant Data Acquisition and Handling System.

E. Monitoring, Recordkeeping, and Reporting Requirements for Gas Turbine Nos. 1, 2, 3, 4, and 21 and Diesel Start-up Engines CT 1, 2, and 21

1. Visible Emissions while Burning Liquid Fuel
Permittee shall monitor opacity according to the following schedule:

a. If liquid fuel is burned in a unit continuously for a time period greater than 48 hours but less than 168 hours, at least one opacity reading will be observed at the exit of the unit's stack.

b. If liquid fuel is burned in a unit continuously for a time period greater than 168 hours, at least one opacity reading will be observed during each 168 hour period at the exit of the unit's stack.

All opacity readings will be observed in accordance with EPA Reference Method 9. Permittee shall log in ink or in an electronic format and maintain a record of the opacity readings from above and the number of hours fuel oil is burned continuously.

2. Particulate Matter while Burning Liquid Fuel

Permittee shall keep on record the purchase specification or other documentation indicating the following information concerning the liquid fuel being fired for each shipment of the fuel received during the permit term:

a. The lower heating value;
b. The ash content; and
c. The fuel firing rate.

3. Sulfur Dioxide

a. While Burning Gaseous Fuel

Permittee shall maintain a vendor-provided copy of that part of the Federal Energy Regulatory Commission (FERC)-approved Tariff agreement that contains the sulfur content and the lower heating value of the fuel.

[A.A.C. R18-2-719.I]

b. While Burning Liquid Fuel

(1) Permittee shall keep on record at the site the purchase specification or other documentation indicating the following information concerning the liquid fuel being fired for each shipment of fuel oil received during the permit term:

(a) The name of the oil supplier;
(b) The sulfur content and the heating content of the oil from which the shipment came; and
(c) The method used to determine the sulfur content of the oil.

(2) Permittee shall maintain records of all emissions calculations performed for any change in (b) above using the following equation:

SO_2 (lb/MMBtu) = 2.0 x [(Weight percent of sulfur/100) x Density (lb/gal)]/[(Heating value (Btu/gal)) x (1 MMBtu/1,000,000 Btu)]

4. Dates and Hours of Operation [A.A.C. R18-2-306.A.4]

Permittee shall record the dates and hours of operation for each piece of stationary rotating machinery. Performance test shall be triggered for each unit according to the following schedule:

a. Gas Turbine Nos. 1 and 2

Performance test shall be considered to be triggered for a unit when that unit has been operated individually for a total of 1480 hours on a twelve month rolling total basis.

b. Gas Turbine No. 3

Performance test shall be considered to be triggered for the unit when the unit has been operated individually for a total of 500 hours on a twelve month rolling total basis.

c. Gas Turbine No. 4

Performance test shall be considered to be triggered for the unit when the unit has been operated individually for a total of 310 hours on a twelve month rolling total basis.

d. Gas Turbine No. 21

Performance test shall be considered to be triggered for the unit when the unit has been operated individually for a total of 930 hours on a twelve month rolling total basis.

5. Permittee shall report to the Director any daily period during which the sulfur content of the fuel being fired in the machine exceeds 0.8 percent. [A.A.C. R18-2-719.J]

6. Permittee shall submit the following information:

a. The dates and hours of operation of each unit for the period of each compliance certification.

b. Until a performance test pursuant to Section III.B of this attachment is completed, Permittee shall report the status of the testing requirements.

[A.A.C. R18-2-306.A.5]

F. Monitoring, Recordkeeping, and Reporting Requirements for Auxiliary Boiler 1 and Plant Water Heaters

1. Visible Emissions while Burning Liquid Fuel

Permittee shall monitor opacity according to the following schedule:

a. If liquid fuel is combusted in the unit continuously for a time period greater than 48 hours but less than 168 hours, at least one opacity reading will be observed at the exit of the unit's stack.

b. If liquid fuel is combusted in the unit continuously for a time period greater than 168 hours, at least one opacity reading will be observed during each 168 hour period at the exit of the unit's stack.

All opacity readings will be observed in accordance with EPA Reference Method 9. Permittee shall log in ink or in an electronic format and maintain a record of the opacity readings from above and the number of hours fuel oil is burned continuously.

2. Particulate Matter while Burning Liquid Fuel

Permittee shall keep on record at the site the purchase specification or other documentation indicating the following information concerning the liquid fuel being fired for each shipment of fuel oil received during the permit term:

a. The lower heating value;
b. The ash content; and
c. The fuel firing rate.

3. Sulfur Dioxide while Burning Liquid Fuel

a. Permittee shall keep on record at the site the purchase specification or other documentation indicating the following information concerning the liquid fuel being fired for each shipment of fuel oil received during the permit term:

(1) The name of the oil supplier;
(2) The sulfur content and heating value of the oil from which the shipment came; and
(3) The method used to determine the sulfur content of the oil.

b. Permittee shall maintain records of all emissions calculations performed for any change in (2) above according to the following equation:

SO_2 (lb/MMBtu) = 2.0 x [(Weight percent of sulfur/100) x Density (lb/gal)]/[(Heating value (Btu/gal)) x (1 MMBtu/1,000,000 Btu)]

4. Dates and Hours of Operation

Permittee shall record the dates and hours of operation of Auxiliary Boiler 1.

5. Permittee shall submit the dates and hours of operation of Auxiliary Boiler 1 for the period of each compliance certification.

6. Permittee shall report all six-minute periods in which the opacity of any plume or effluent exceeds 15 percent from Auxiliary Boiler 1 and the water heaters.

[A.A.C. R18-2-724.J]

G. Monitoring, Recordkeeping, and Reporting Requirements for Non-Point Sources

1. Open Areas, Roadways & Streets, Storage Piles and Material Handling

Permittee shall maintain records of the dates on which any of the activities listed in I.E.1.b.(1) through (9) of this Attachment were performed and control measures employed.

2. Open Burning

The monitoring requirements for I.E.2 of this Attachment may be complied with by maintaining copies of all open burning permits on file.

H. Monitoring, Recordkeeping, and Reporting Requirements for Other Periodic Activities

1. Abrasive Blasting

Each time an abrasive blasting project is conducted, the Permittee shall log in ink or in an electronic format, a record of the following:

a. The date the project was conducted;
b. The duration of the project; and
c. Type of control measures employed.

2. Use of Paints

a. Each time a spray painting project is conducted, the Permittee shall maintain an Material Safety Data Sheets for all paints and solvents used and log in ink or in an electronic format, a record of the following:

(1) The date the project was conducted;
(2) The duration of the project; and
(3) Type of control measures employed.

b. Architectural coating and spot painting projects shall be exempt from the recordkeeping requirements of part a. above.

3. Mobile Sources

Permittee shall keep a record of all emissions related maintenance activities performed on Permittee's mobile sources stationed at the facility as per manufacturer's specifications.

4. Demolition/Renovation

Permittee shall keep all required records in a file. The required records include the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.

5. Nonvehicle Air Conditioner Maintenance and/or Services

Permittee shall keep all records required by the applicable requirements of 40 CFR 82 - Subpart F in a file.

III. TESTING REQUIREMENTS

A. In accordance with the EPA Reference Method 9, the Method 9 reading shall be defined as an average of 24 consecutive opacity observations recorded at 15-second intervals. A set is composed of any 24 consecutive observations. Sets need not be consecutive in time and in no case shall two sets overlap. For each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24.

[40 CFR 60, Appendix A, Method 9, Section 2.5]

B. Gas Turbine Nos. 1, 2, 3, 4, and 21 [A.A.C. R18-2-306.A.3]

1. Permittee shall conduct one set of performance tests for nitrogen oxides and carbon monoxide based on the schedule given in Section II.E.4 of this Attachment within six months of the trigger date.

2. Permittee shall use USEPA Reference Methods 20 and 10 to conduct the performance test for nitrogen oxides and carbon monoxide respectively as specified in the Arizona Testing Manual for Air Pollutant Emissions.

ATTACHMENT "C": APPLICABLE REQUIREMENTS

Air Quality Control Permit No. 1000107
For
ARIZONA PUBLIC SERVICE COMPANY - YUCCA POWER PLANT

REQUIREMENTS SPECIFICALLY IDENTIFIED AS APPLICABLE

Except for Acid Rain Provisions, compliance with the terms contained in this permit shall be deemed compliance with the following federally applicable requirements in effect on the date of permit issuance:

ARIZONA ADMINISTRATIVE CODE (A.A.C.) TITLE 18, Chapter 2

ARTICLE 6	**EMISSIONS FROM EXISTING AND NEW NONPOINT SOURCES**
R18-2-601	General
R18-2-602	Unlawful Open Burning
R18-2-604	Open Areas, Dry Washes, or Riverbeds
R18-2-605	Roadways and Streets
R18-2-606	Material Handling
R18-2-607	Storage Piles
R18-2-610	Evaluation of Nonpoint Source Emissions
ARTICLE 7	**EXISTING STATIONARY SOURCE PERFORMANCE STANDARDS**
R18-2-702.B	General Provisions
R18-2-703.B	Standards of Performance for Existing Fossil-fuel Fired Steam Generators and General Fuel-burning Equipment
R18-2-703.C.1	Standards of Performance for Existing Fossil-fuel Fired Steam Generators and General Fuel-burning Equipment
R18-2-703.E.1	Standards of Performance for Existing Fossil-fuel Fired Steam Generators and General Fuel-burning Equipment
R18-2-703.H	Standards of Performance for Existing Fossil-fuel Fired Steam Generators and General Fuel-burning Equipment
R18-2-710.C	Standards of Performance for Existing Storage Vessels for Petroleum Liquids
R18-2-719.B	Standards of Performance for Existing Stationary Rotating Machinery
R18-2-719.C.1	Standards of Performance for Existing Stationary Rotating Machinery
R18-2-719.E	Standards of Performance for Existing Stationary Rotating Machinery
R18-2-719.F	Standards of Performance for Existing Stationary Rotating Machinery
R18-2-719.H	Standards of Performance for Existing Stationary Rotating Machinery
R18-2-719.I	Standards of Performance for Existing Stationary Rotating Machinery
R18-2-719.J	Standards of Performance for Existing Stationary Rotating Machinery
R18-2-724.B	Standards of Performance for Fossil-fuel Fired Industrial and Commercial Equipment
R18-2-724.C.1	Standards of Performance for Fossil-fuel Fired Industrial and Commercial Equipment
R18-2-724.E	Standards of Performance for Fossil-fuel Fired Industrial and Commercial Equipment
R18-2-724.G	Standards of Performance for Fossil-fuel Fired Industrial and Commercial Equipment
R18-2-724.J	Standards of Performance for Fossil-fuel Fired Industrial and Commercial Equipment
R18-2-726	Standards of Performance for Sandblasting Operations
R18-2-727	Standards of Performance for Spray Painting Operations

SIP R9-2-527.C	Standards of Performance for Spray Painting Operations
R18-2-730.A.1	Standards of Performance for Unclassified Sources
R18-2-730.D	Standards of Performance for Unclassified Sources
R18-2-730.F	Standards of Performance for Unclassified Sources
R18-2-730.G	Standards of Performance for Unclassified Sources

ARTICLE 8 EMISSIONS FROM MOBILE SOURCES (NEW AND EXISTING)

R18-2-801	Classification of Mobile Sources
R18-2-804	Roadway and Site Cleaning Machinery

ARTICLE 11 FEDERAL HAZARDOUS AIR POLLUTANTS

R18-2-1101.A.8	National Emission Standards for Hazardous Air Pollutants (NESHAPs), (by reference) 40 CFR 61, Subpart M - Asbestos

ACCIDENTAL RELEASE PREVENTION PROGRAM

40 CFR 68	Chemical Accident Prevention Provisions

STRATOSPHERIC OZONE PROTECTION

40 CFR 82	Subpart F - Recycling and Reducing Emissions

ACID RAIN PROVISIONS

40 CFR 72	Permits Regulation
40 CFR 73	Sulfur Dioxide Allowance System
40 CFR 74	Sulfur Dioxide Opt-ins
40 CFR 75	Continuous Emission Monitoring

ATTACHMENT "D": EQUIPMENT LIST

Air Quality Control Permit No. 1000107
For
ARIZONA PUBLIC SERVICE COMPANY - YUCCA POWER PLANT

Permitted Equipment					
Equipment ID	**Description**	**Size**	**Serial Number**	**Model**	**Date of Commercial Operation/ Manufacture**
Steam Unit 1	Tangentially-fired steam electric generating unit	80 MW*		Combustion Engineering	3/4/59
Gas Turbine 1	Simple cycle gas turbine generating unit	19.1 MW*	214363	General Electric Frame 5	7/1/71
Gas Turbine 2	Simple cycle gas turbine generating unit	19.1 MW*	214362	General Electric Frame 5	7/1/71
Gas Turbine 3	Simple cycle gas turbine generating unit	54.6 MW*	217812	General Electric Frame 7	6/20/73
Gas Turbine 4	Simple cycle gas turbine generating unit	53.9 MW*	237986	General Electric Frame 7	7/9/74
Gas Turbine 21	Simple cycle gas turbine generating unit	21.6 MW*	245107	General Electric Frame 5	12/28/78 (Commenced construction prior to October 3, 1977)
Diesel Startup Engine CT 1	Gas turbine no. 1 startup engine	500 HP*	12VA24361	O' Donell-Quigley Model 7123-7000	7/1/71
Diesel Startup Engine CT 2	Gas turbine no. 2 startup engine	500 HP*	12VA24360	O' Donell-Quigley Model 7123-7000	7/1/71

Permitted Equipment					
Diesel Startup Engine CT 21	Gas turbine no. 21 startup engine	500 HP*	12VA05831	Massaro Detroit Diesel Allison Model 7123-7000	12/28/78 (Commenced construction prior to October 3, 1977)
Auxiliary Boiler	Boiler to heat fuel oil for steam unit	71.2 MMBtu/hr	7869	Cleaver Brooks DL-68-400-CN-5	1974
Cooling Tower	Steam unit cooling tower	40,000 gpm	--	Foster Wheeler	--
Nonpoint Sources	--	--	--	--	--
Sand Blasting	--	--	--	--	--
Spray Painting	--	--	--	--	--
Mobile Sources	--	--	--	--	--
Demolition and Renovation	--	--	--	--	--
Air Conditioner Maintenance and Service	--	--	--	--	--

Note: *Rated generating capacity of the unit

CONTINUOUS EMISSION MONITORS

Steam Unit	NOx Monitor	SO_2 Monitor	O_2 Monitor	Opacity Monitor	Flow Monitor
Steam unit 1	Rosemount NOx Monitor Serial No. 1000044 (primary) Serial No. 1000113 (backup)	n/a	Siemens Oxymat O_2 Monitor Serial No. E1-851 (primary) Serial No. E2-825 (backup)	n/a	n/a

ATTACHMENT "E": INSIGNIFICANT ACTIVITIES

Air Quality Control Permit No. 1000107
For
ARIZONA PUBLIC SERVICE COMPANY - YUCCA POWER PLANT

S.No.	POTENTIAL EMISSION POINTS CLASSIFIED AS "INSIGNIFICANT ACTIVITIES" PURSUANT TO A.A.C. R18-2-101.54
1	Accidental fires.
2	Acetylene, butane, and propane torches.
3	Acid tank vents.
4	Activities associated with maintenance, repair, or dismantlement of an emission unit or other equipment.
5	Aerosol can usage.
6	Auxiliary boiler blowdown.
7	Auxiliary boiler safety relief valves
8	Bearing cooling water.
9	Boiler acid wash.
10	Boiler feed pump hydraulic coating.
11	Brazing and soldering activities.
12	Cathodic protection.
13	Caulking operations.
14	Caustic tank vents.
15	Corona.
16	Demineralizer regeneration.
17	Electric motors.
18	Emissions sampling and associated activities.
19	Evaporative coolers.
20	Facilities used for preparing food.
21	Flammable storage cabinets.
22	Flares used to indicate danger to the public.
23	Fuel oil piping systems including: flanges, valves, pump seals, pressure relief valves, and other individual components.

S.No.	POTENTIAL EMISSION POINTS CLASSIFIED AS "INSIGNIFICANT ACTIVITIES" PURSUANT TO A.A.C. R18-2-101.54
24	Gas turbine false start drains.
25	Gas turbine gas vent #1.
26	Gas turbine gas vent #2.
27	Gas turbine gas vent #3.
28	Gas turbine lube oil vents.
29	Gas yard vents.
30	General offices activities.
31	Hydraulic system reservoirs.
32	Janitorial activities.
33	Laboratory facilities.
34	Lube oil storage area.
35	Medical activities.
36	Mercury exhaust hood.
37	Natural gas fuel piping system including: flanges, valves, pump seals, pressure relief valves, and other individual components.
38	Normal usage of miscellaneous consumer products.
39	Oil circuit breakers.
40	Oil filter draining.
41	Paint storage area.
42	Pesticide/herbicide activities.
43	Portable testing equipment and testing activities.
44	Portable welder.
45	Pump/motor oil reservoirs.
46	PVC/ABS pipe welding.
47	Safety devices, fire extinguishers, and cardox systems.
48	Satellite accumulation barrels.
49	Septic tanks.
50	Service water tank and piping.
51	Small equipment fueling area.

S.No.	POTENTIAL EMISSION POINTS CLASSIFIED AS "INSIGNIFICANT ACTIVITIES" PURSUANT TO A.A.C. R18-2-101.54
52	Smoking areas.
53	Station transformers.
54	Steam cleaners.
55	Steam unit air ejector.
56	Steam unit and gas turbine battery banks.
57	Steam unit boiler blowdown.
58	Steam unit drum vents.
59	Steam unit gas vent.
60	Steam unit gland steam exhauster.
61	Steam unit hydrogen scavenging and vents.
62	Steam unit oil tank vents
63	Steam unit safety relief valves.
64	Storage tank #1, 100,000 bbls, Fuel oil.
65	Storage tank #2, 30,000 bbls, Fuel oil.
66	Storage tank #3, 6000 bbls, Fuel oil.
67	Storage tank #4, 60,000 bbls, Fuel oil.
68	Storage tank #5, 100,000 bbls, Fuel oil.
69	Storage tank #6, 50,000 bbls, Fuel oil.
70	Storage tank #7, 286 bbls, Fuel oil.
71	Storage tank #7, 13.7 bbls, Fuel oil.
72	Storm water drainage area.
73	Used oil storage area.
74	Welding.
75	Evaporation pond.
76	Chemical storage tanks (limited to chemicals not listed in 40 CFR 68.13, chemicals listed in 40 CFR 68.13 but stored in quantities less than threshold levels, and not subject to any applicable regulation under the Act or the Arizona Revised Rules)
77	Chemical storage, hazardous products, and staging area (limited to chemicals not listed in 40 CFR 68.13, chemicals listed in 40 CFR 68.13 but stored in quantities less than threshold levels, and not subject to any applicable regulation under the Act or the Arizona Revised Statutes)

S.No.	POTENTIAL EMISSION POINTS CLASSIFIED AS "INSIGNIFICANT ACTIVITIES" PURSUANT TO A.A.C. R18-2-101.54
78	Cooling tower chemical additives (limited to chemicals not listed in 40 CFR 68.13, chemicals listed in 40 CFR 68.13 but stored in quantities less than threshold levels, and not subject to any applicable regulation under the Act or the Arizona Revised Statutes)

ATTACHMENT "F": PHASE II ACID RAIN PROVISIONS

Air Quality Control Permit No. 1000107
For
ARIZONA PUBLIC SERVICE COMPANY - YUCCA POWER PLANT

I. Statement of Basis

Statutory and Regulatory Authorities: In accordance with Arizona Revised Statutes, Title 49, Chapter 3, Article 2, Section 426.N, and Titles IV and V of the Clean Air Act, the Arizona Department of Environmental Quality issues this Phase II Acid Rain Permit pursuant to Arizona Administrative Code, Title 18, Chapter 2, Article 3, Section 333 (A.A.C. R18-2-333), "Acid Rain".

II. SO_2 Allowance† Allocations and NO_x Requirements for each affected unit

		1998	1999	2000	2001	2002	2003	2004
Unit 1	SO_2 allowances under Tables 2, 3, or 4 of 40 CFR part 73	NA	NA	42*	42*	42*	42*	42*
	NO_x limit	This unit is not subject to a NO_x limit under 40 CFR Part 76.						

† As defined under 40 CFR §72.2, "Allowance" means an authorization by the Administrator under the Acid Rain Program to emit up to one ton of sulfur dioxide during or after a specified calendar year.

* The number of allowances allocated to Phase II affected units by U.S. EPA may change in a 1998 revision to 40 CFR part 73 Tables 2, 3, and 4. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO_2 allowance allocations identified in this permit (See 40 CFR 72.84).

III. Comments, Notes and Justifications

None.

IV. Permit Application

The Permittee, and any other owners or operators of the units at this facility, shall comply with the requirements contained in the attached acid rain permit application (OMB No. 2060-0258) signed by the Alternate Designated Representative Warren W. Ohland on 12/05/95.